The impact and reach of web-based parenting guidelines to prevent childhood depression and anxiety: Findings from online user surveys

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ABSTRACT

An online study was conducted to evaluate a new set of web-based parenting guidelines for the prevention of childhood depression and anxiety (http://www.parentingstrategies.net/depression). Visitors to the website were invited to respond to a demographic survey. Users who consented to a follow-up evaluation survey were emailed a survey web link a month later, asking their appraisals of the guidelines and actions taken as a result of accessing the guidelines. The findings suggest that the parenting guidelines were generally well-received by users and may be disseminated as a universal resource to parents and carers for the prevention of childhood depression and anxiety.

1. Introduction

Prevention and early intervention for childhood mental disorders is increasingly recognized as a public health priority (Lawrence et al., 2015; Waddell, McEwan, Peters, Hua & Garland, 2007; Whiteford et al., 2013). Mental health problems that begin in childhood interfere with children's healthy development, and place substantial burden on affected individuals and their families, including adverse social and economic impacts. A study in the Netherlands reported that the public cost of raising an anxious child is twenty times that of raising a non-anxious child (Bodden, Dirksen, & Bögels, 2008). To reduce these impacts, more work is needed to improve the quality and accessibility of prevention resources. Besides reducing the costs of clinical treatment, preventive interventions could also facilitate the identification of children at risk of developing clinical disorders (Fisak, Richard, & Mann, 2011), thereby allowing earlier intervention and minimizing the likelihood of these disorders becoming chronic. With emerging evidence that supports the cost-effectiveness of preventive interventions (Mihalopoulos & Vos, 2013; Mihalopoulos et al., 2015), a shift in focus to prevention in childhood may translate into greater savings and health gains over time.

The literature on childhood internalizing disorders suggests that an interplay of parental factors and child characteristics influences child outcomes (Garber, 2006; Pahl, Barrett, & Gullo, 2012; Schleider & Weisz, 2016), and that existing programs which target a selection of parental factors show promising effects (Beardslee,

Wright, Rothberg, Salt, & Versage, 1996; Rapee, Kennedy, Ingram, Edwards, & Sweeney, 2005; Yap et al., 2016). Parents are a viable target for prevention in childhood because they may possess the life experience to help them appreciate the value of prevention, and are likely to be motivated to take actions for the well-being of their children (Yap & Jorm, 2015). Programs offered to parents typically draw heavily from social learning and cognitive behavioral principles, and are aimed at reducing parental behaviors that are influential in the development and maintenance of anxiety or depression (Barrett, Dadds, & Rapee, 1996; Beardslee et al., 1996; Dadds & Roth, 2008; Rapee, Schniering, & Hudson, 2009). However, many evidence-based parenting programs are face-to-face programs that are either not accessible outside metropolitan areas, or are poorly subscribed by parents due to resource issues such as limited availability of trained providers, costs and logistical factors related to scheduling and transportation difficulties (Mytton, Ingram, Manns, & Thomas, 2014; Spoth & Redmond, 2000). Moreover, population surveys of parents have reported low exposure to evidence-based parenting programs (Sanders et al., 1999). This suggests that traditional methods of delivering evidence-based information and programs through face-to-face workshops may not cater adequately to the needs of parents, who may want to be informed early about what they can do to promote well-being and prevent mental health problems in their children, but are limited by resource difficulties. The challenge of inadequate program reach may be redressed in part by adopting a public health approach to the development and dissemination of evidence-based prevention programs for parents

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(Sanders, Cann, & Markie-Dadds, 2003; Yap & Jorm, 2015). From a public health perspective, a universal preventive program that targets the whole range of modifiable parental factors could play an important role in altering children's developmental trajectories and reduce the likelihood of internalizing disorders from developing, regardless of their current risks. In contrast to selective or indicated prevention programs, universal prevention programs and strategies are open to any parent who wishes to participate, and hence may reach a larger proportion of the population while overcoming difficulties associated with identifying and screening participants in selective or indicated programs (Offord, 2000). Moreover, universal prevention programs hold potential to overcome the perceived stigma and labelling associated with seeking professional parenting help (Koerting et al., 2013), and hence may be perceived as more acceptable by parents.

The Internet is increasingly recognized as a potentially effective medium to disseminate mental health information and to deliver web- or computer-based programs (Hart, Jorm, Paxton, & Cvetkovski, 2012; Kazdin, 2015). Accessing services and psychological interventions through the use of technologies has been found to be acceptable for the treatment of depression and anxiety disorders, as well as parent training in child behavior management (Andrews, Cuijpers, Craske, McEvoy, & Titov, 2010; Breitenstein, Fogg, Ocampo, Acosta, & Gross, 2016; Hedman, Ljótsson, & Lindefors, 2012). With rapidly increasing internet penetration worldwide, parents and professionals alike are now exposed to a proliferation of information on parenting and child mental health. Several notable organizations such as Anxiety and Depression Association of America and Anxiety BC (Canada) have websites that provide quality information backed up by a scientific panel and research evidence. However, their content is mostly oriented towards affected individuals themselves, or provides information on mental health symptoms and resources for seeking professional help, rather than targeting parents or carers who want to take proactive steps to reduce the risk of their children developing mental health problems. On the other hand, there are also some websites and forums that offer parenting tips for promoting child mental health, but the effects of currently-available information have not been adequately evaluated. The literature on parents' online behavior further indicates that parents often search for information related to child development, specific medical conditions and parenting strategies (Bernhardt & Felter, 2004), but parents also express concern about the credibility of the information and its sources (Dworkin, Connell, & Doty, 2013).

Given the variability in the scientific quality of parenting information online, and the burgeoning evidence base indicating the influence of parental factors on child mental health, there was a great need for more effective translation of the research evidence and information found from public forums into practical parenting resources that parents can access. To this end, Yap and colleagues conducted a systematic review (Yap & Jorm, 2015) and a Delphi consensus study (Yap, Fowler, Reavley, & Jorm, 2015) with a panel of international experts in parenting and child mental health. Parenting strategies that were evidence-based and endorsed by experts as important for preventing childhood depression and anxiety were distilled into a set of guidelines titled, 'How to Reduce Your Child's Risk of Depression and Clinical Anxiety: Strategies for Parents of Primary-School Aged Children' (Parenting Strategies Program, 2014). These guidelines were made available on http://www.parentingstrategies.net/depression in July 2014, and have attracted tens of thousands of visitors internationally. While such numbers may indicate strong interest in the parenting guidelines, they tell us little about the public's actual attitudes and perceptions about the guidelines and its parenting messages. In fact, very little research has been conducted on parents' attitudes towards guidelines and messages directed at parenting (Metzler, Sanders, Rusby, & Crowley, 2012). The literature suggests that consumer awareness and perceptions are important factors which could present as a barrier or facilitator to uptake of services and programs (Koerting et al., 2013; Owens et al., 2002). Consequently, feedback from users about the

acceptability and usefulness of the content can be helpful for generating more engaging parenting messages and informing future strategies for implementation and dissemination. Hence, this study aimed to evaluate the reach and impact of the new web-based parenting guidelines developed for preventing childhood depression and anxiety (Parenting Strategies Program, 2014) by examining users' appraisals of the guidelines and the actions taken as a result of accessing the guidelines.

In the current study, 'parent' or 'carer' includes any adult who fulfils a caregiving role, regardless of the biological or legal relationship to the child under their care. In particular, this study sought to identify: 1) the characteristics of people who were interested in downloading the guidelines (i.e. users); 2) how users found out about the guidelines; 3) users' reasons for downloading the guidelines; 4) how the guidelines were used; and 5) users' appraisals of the usefulness of the guidelines. The study also examined: 6) the associations between users' perceptions of the extent to which the guidelines included information they were seeking, how much of the guidelines they had read, and their appraisals of the guidelines. To further understand the impact of the guidelines on users, the study also investigated: 7) the extent to which parents tried to change their parenting after reading the guidelines; 8) users' evaluations of the usefulness of developing other preventive interventions based on the Guidelines; and 9) users' suggestions for improving the guidelines.

2. Methods

2.1. Participants

The current study sample included individuals who downloaded the *Parenting Guidelines* from the *Parenting Strategies* website between July 16th, 2014 (when the guidelines were first made available online) and February 29th, 2016. During this recruitment period, 8961 users were presented with the invitation to complete Survey 1. In total, 1753 web users completed Survey 1. This sample included 1561 (89%) parents/carers and 192 (11%) web users who were not parents/carers. From this initial sample who completed Survey 1, 1175 (67%) web users consented to receive Survey 2. Survey 2 was eventually completed by 157 of these users (9% of those who completed Survey 1) within the study period.

There were no exclusion criteria for Survey 1. To participate in Survey 2, individuals were required to be over the age of 18 and fluent in English. These exclusion criteria were applied because the guidelines were developed for adults with a moderate level of competency in English, and for parents/carers of primary-school aged children.

2.2. Measures

Survey 1 was designed to gather information describing the characteristics of web users who downloaded the *Parenting Guidelines*. It contained six demographic questions (e.g. age, gender, and number of children in care). Two questions were asked about the guidelines ('How did you find out about these guidelines?' and 'What led you to download these guidelines?'). The final question asked participants to provide their e-mail address if they consented to being contacted for Survey 2.

Survey 2 was adapted from an existing questionnaire used to evaluate web-based Mental Health First Aid Guidelines (Hart et al., 2011), and had two versions (Parent/Carer and Non-Parent/Carer). It was designed to gather information about how useful the information in the *Parenting Guidelines* had been to web users, and what impact reading the guidelines was perceived to have on parents' behaviors over the month post-download. The first six questions in both versions of Survey 2 were multiple-choice questions about how much of the guidelines were read, their perceived usefulness and likelihood of future use. Respondents were also asked to rate the usefulness of using the